1.0 Purpose of and Need for Action

1.1 Purpose of the Project

The proposed action is to provide an improved transportation facility for local and through traffic in Henderson and Warren Counties which includes providing an improved facility between the existing freeway east of Monmouth and the Mississippi River at Gulfport (Figure 1-1). The proposed improvement meets the needs of system capacity, system continuity, and travel safety.

The proposed U.S. Route 34 improvement would provide a high-type transportation facility with an appropriate connection to the recently constructed four-lane facility east of Gulfport in the vicinity of Carman Road and extend 40 kilometers (km) [24.85 miles (mi)] to the east connecting to an existing four-lane facility in the Monmouth area. This improvement is the final section being studied for multi-lane improvement of U.S. Route 34 between I-74 near Galesburg, Illinois and Burlington, Iowa.

1.2 Need for the Project

1.2.1 Travel Safety

This proposal is intended to improve traffic safety in the project area. Between January 1995 and December 1997, 286 accidents occurred on U.S. Route 34 between the project termini of Carman Road to Illinois Route 164 east of Monmouth. Four fatalities have occurred on existing U.S. Route 34 during this time period. Within this portion of U.S. Route 34, the majority of the accidents reported were characterized as turning, rear-end, animal, angle, and fixed object collision accidents. These types of accidents are characteristic of two-lane roadways with higher speeds, multiple access points, restricted sight distances (41 percent of the current roadway is marked as no passing), and substandard roadway cross section or geometry. Accident data compiled by the Illinois Department of Transportation (IDOT) between 1993 and 1995 has identified seven high-accident locations within the U.S. Route 34 project corridor. The identified high-accident locations are the intersections of U.S. Route 34 at Carman Road and Illinois Route 164 in Henderson County, County Highway (CH) 11 in Warren County and Broadway Avenue (Illinois Route 164), Harlem Avenue, Main Street (U.S. Route 67 North), and Sixth Street in the city of Monmouth. The high-accident locations are shown on Figure 1-1.

U.S. Route 34 from Gulfport to U.S. Route 67 southwest of Monmouth is a two-lane highway. Several portions of existing U.S. Route 34 are characterized by geometric deficiencies. For example, much of U.S. Route 34 from U.S. Route 67 to Gulfport lacks adequate shoulders and clear zones. In addition, portions of the roadway do not meet current standards for horizontal alignment. Several curves along existing U.S. Route 34 have design speeds of 100 km per hour (km/hr) [62 mi per hour (mph)] or less. Passing sight distance along the portion of U.S. Route 34 east of Gulfport to the U.S. Route 67 interchange at Monmouth is limited. No-passing zones along the route comprise approximately 41 percent of the entire two-lane portion of the project area.

Around the west and north sides of Monmouth, U.S. Route 34 is a four-lane expressway with at-grade intersections. Three of these at-grade intersections are currently signalized. U.S. Routes 34 and 67 are concurrent from Main Street (U.S. Route 67, north) along the north-central part of Monmouth to the south at the interchange of U.S. Route 34 with U.S. Route 67 south. Within the four-lane expressway portion of the existing route, the accident rate for 1998, 1999, and 2000 has ranged up to 4.38

accidents per million vehicle miles traveled. The statewide average accident rate for an urban divided highway is 1.52 accidents per million vehicle miles traveled. Accidents in this area were predominantly characterized as turning, angle, or rear-end accidents. These accidents are characteristic of the introduction of stop conditions (signalized intersections) after long stretches of freeway or non-signalized expressway driving, restricted lines of sight for turning vehicles at major at-grade intersections, higher traffic volumes, and higher percentages of trucks.

Improving U.S. Route 34 would be expected to reduce traffic accident rates in these areas by providing a safer, more efficient route between the Monmouth and Gulfport areas. Specifically, improved profile grades will improve sight distances; flatter horizontal curves will provide for a higher design speed; wide medians will allow for a safety area for vehicles turning onto Route 34; turn lanes on the mainline will keep turning vehicles separated from through movements; and two lanes in each direction will allow for safer passing of slow moving vehicles.

1.2.2 System Continuity

This proposal is intended to address the existing interruption of four-lane facilities by tying into the sections to the west and east, which are currently four-lane highways. As a result, the function and continuity of the regional highway will be enhanced by this proposed four-lane connection.

U.S. Route 34 is a key regional corridor for the east/west movement of people and goods in, and through, west central Illinois. An interruption currently exists along U.S. Route 34 between the four-lane facilities at Gulfport and at Monmouth. The eastern terminus of this project will connect to the recently completed four-lane facility east of Gulfport, in the vicinity of Carman Road.

1.2.3 System Capacity

Traffic volumes on U.S. Route 34 from Gulfport to Monmouth are variable, with 1995 average daily traffic (ADT) of 10,300 west of Carman Road, between 7,500 and 3,950 ADT from Carman Road to the U.S. Route 67 interchange, and from 6,900 to 11,200 ADT along the expressway portion of U.S. Route 34/67 near Monmouth. Projected traffic volumes along existing U.S. Route 34 are expected to range from 6,200 to 17,500 ADT in the 2025 design year.

Currently, the vehicle mix on U.S. Route 34 in the project corridor includes large volumes of truck traffic, ranging between 13 and 31 percent. The percentage of truck traffic is expected to remain high since U.S. Route 34 provides a major east-west transportation route for western Illinois. The next nearest crossings of the Mississippi River via state highways are at Muscatine, Iowa on Illinois Route 92 approximately 75 km (46 mi) north and at Niota, Illinois on Illinois Route 9 approximately 30 km (17 mi) south. These crossings are two-lane bridges.

Level of service (LOS) is a qualitative measure describing operational conditions within a traffic stream. LOS ratings for a mainline facility are described as follows:

- LOS A -- Describes free-flow conditions. Operation of vehicles is virtually unaffected by the presence of other traffic.
- LOS B -- Free-flow conditions, although presence of other vehicles begins to be noticeable.
- LOS C -- Influences of traffic density become marked.
- LOS D -- Borders on unstable traffic flow. Ability to maneuver is severely restricted.
- LOS E -- Operation at capacity.

- LOS F -- Flow breakdown. Demands exceed capacity.

The existing traffic facility would provide a LOS C, LOS D, or LOS E for many portions of the route in the design year, 2025. This would result in reduced speeds and maneuverability, higher accident rates, and increased congestion. The IDOT design criteria recommend a LOS B. The proposed preferred alternative is projected to provide a LOS B for the design period.

1.3 Project History

In 1969, the Illinois Legislature authorized the selling bonds for the purpose of improving primary routes and financing of the Illinois Supplemental Freeway System. The Illinois Division of Highways was then directed to prepare Corridor Location Reports for the purpose of evaluating and selecting corridors for the supplemental freeway system.

One of the corridors evaluated and approved was the U.S. Route 34 corridor from west of Gladstone to east of Monmouth, designated as Supplemental Freeway F-404. This corridor was approved in 1970. The corridor from the Mississippi River to west of Gladstone was approved as a separate action in 1967.

The Mississippi River bridge for U.S. Route 34 from Burlington, Iowa to Gulfport, Illinois was completed in 1994. The bridge and its approaches were constructed to freeway standards connecting to the U.S. Route 34 freeway through Burlington, Iowa. The four-lane expressway from Chinn Avenue at Gulfport east to Carman Road has been completed.

U.S. Route 34 east of Monmouth was constructed as a freeway in 1987 from the Galesburg area to the Monmouth area. This freeway improvement connects a four-lane divided highway (expressway) which carries U.S. Route 34 and U.S. Route 67 traffic around the north and west sides of Monmouth. The majority of the expressway improvements were constructed in 1972. South of Monmouth, U.S. Route 67 was constructed and opened to traffic in 1995, as a four-lane expressway. An interchange at U.S. Route 34 and U.S. Route 67 southwest of Monmouth was constructed at that time.

A Notice of Intent (NOI) (Appendix A) was published in the Federal Register (FR) (November 28, 1997) to prepare an Environmental Impact Statement (EIS) for the construction of U.S. Route 34 as a four-lane highway.